**FIG. 1**

**FIG. 2**

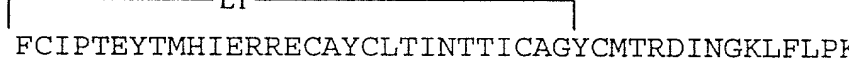
## Human Glycoprotein Hormones $\alpha$ -Subunit

APDVQDCPECTLQENPFFSQPGAPILQCMGCCFSRAYPTPLRSKKTMLVQ  
KNVTSESTCCVAKSYNRVTVMGGFKVENHTACHCSTCYHKS

**FIG. 3**

(SEQ ID NO: 2)

## Human Thyroid Stimulating Hormone (TSH)


  
1      FCIPTEYTMHIERRECA YCLTINTTICAGYCMTRDINGKLF LPKYALSQD
  
51     VCTYRDFIYRTVEIPGCPLHVAPYFSYPVALSCKCGKCNTDYSDCIHEAI
  
101    KTN YCTKPQKS YLVGFSV

**FIG. 4**

(SEQ ID NO: 3)

### Human Chorionic Gonadotropin (CG)

1 SKEPLRPRCRPINATLAVEKEGCPVCITVNTTICAGYCPTMTRVLQGVLP  
 51 ALPQVVCNYRDVRFESIRLPGCPRGVNPVVSYAVALSCQCALCRRSTTDC  
 101 GGPKDHPLTCDDPRFQDSSSSKAPPPSLPSPSRLPGPSDT

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## FIG. 5

(SEQ ID NO: 4)

### Human Luteinizing Hormone (LH)

1                   8                   L1                   33  
SREPLRPWCHPINAILAVEKEGCPVCITVNTTICAGYCPTMMRVLQAVLP  
51                   58                   L3                   87  
PLPQVVCTYRDVRFESIRLPGCPRGVDPVVSFPVALSCRCGPCRRSTSDC  
101                   GGPKDHPLTCDHPQLSGLLFL

## FIG. 6

(SEQ ID NO: 5)

### Human Follicle Stimulating Hormone (FSH)

1                   4                   L1                   27  
NSCELTNITIAIEKEECRFCISINTTWCAGYCYTRDLVYKDPARPKitCT  
51                   65                   L3                   81  
FKELVYETVRVPGCAHHADSLYTPVATQCHCGKCDSDSTDCTVRGLGPS  
101                   YCSFGEMKE

## FIG. 7

(SEQ ID NO: 6)

### Human Platelet-Derived Growth Factor-A (PDGF A-Chain)

1                   11                   L1                   36  
SIEEAVPAVCKTRTVIYEIPRSQVDPTSANFLIWPPCVEVKRCTGCCNTS  
51                   58                   L3                   88  
SVKCQPSRVHHRSVKVAKVEYVRKKPKLKEVQVRLEEHLACATTSLNP  
101                   DYREEDTGRPRESGKKRKRRLKPT

(SEQ ID NO: 7)

## 151 KTALKETLGA

(SEQ ID NO: 8)

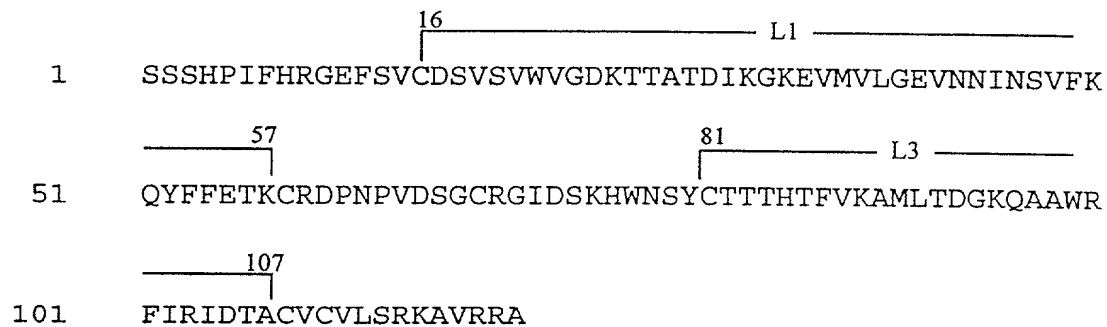
151 LFVQDPQTCKSCKNNTDSRCKARQLELNERTCRCDKPRR

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## FIG. 10

(SEQ ID NO: 9)

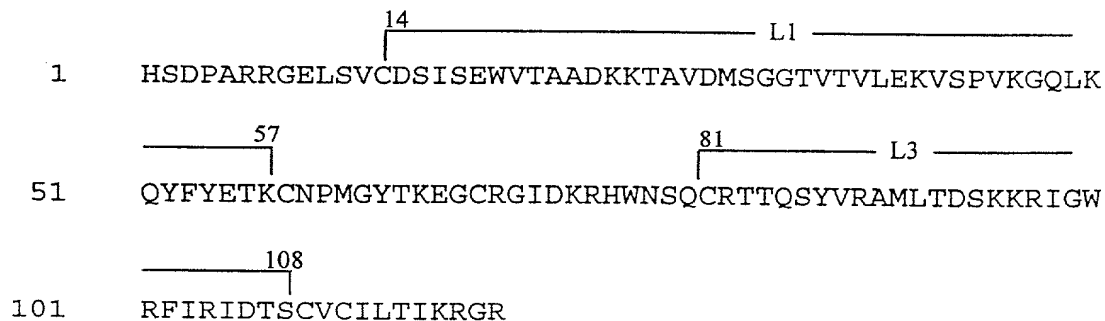
### Human Nerve Growth Factor



## FIG. 11

(SEQ ID NO: 10)

### Human Brain Derived Neurotrophic Factor



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## FIG. 12

(SEQ ID NO: 11)

### Human Neurotrophin (NT)-3

1 YAEHKSHRGEYSVCDSESLWVTDKSSAIDIRGHQVTVLGEIGKTNSPVKQ  
15 L1  
51 YFYETRCKEARPVKNGCRGIDDRHWSQCKTSQTYVRASLTENNKLVGWR  
56 80 L3  
101 WIRIDTSCVCALSRKIGRT  
107

## FIG. 13

(SEQ ID NO: 12)

### Human Neurotrophin (NT)-4

1 GVSETAPASRRGELAVCDAVSGWVTDRRTAVDLRGREVEVLGEVPAAGGS  
18 L1  
51 PLRQYFFETRCKADNAEEGGPGAGGGGCRGVDRRHWSSECKAKQSYVRAL  
60 91 L3  
101 TADAQGRVGVWRWIRIDTACVCTLLSRTGRA  
118

## FIG. 14

(SEQ ID NO: 13)

### Human Transforming Growth Factor (TGF)- $\beta$ 1

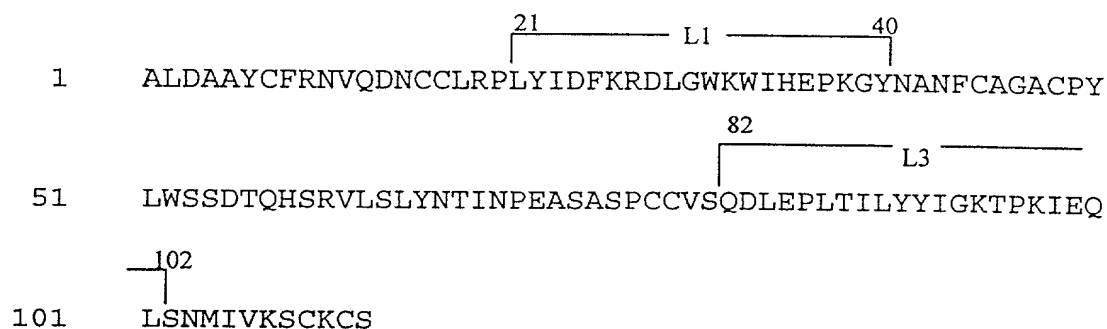
1 ALDTNYCFSSSTEKNCCVRQLYIDFRKDLGWKWIHEPKGYHANFCLGPCPY  
21 40 L1  
51 IWSLDTQYSKVLALYNQHNPASAAAPCCVPQALEPLPIVYYVGRKPKVEQ  
82 L3  
101 LSNMIVRSCKCS  
102

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## FIG. 15

(SEQ ID NO: 14)

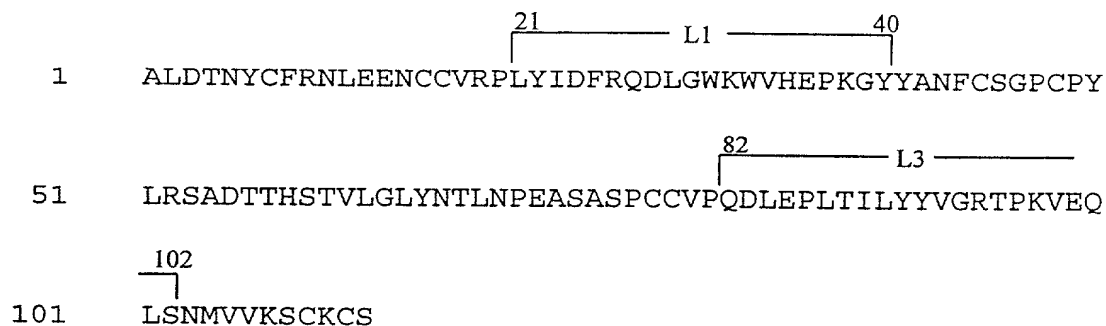
### Human Transforming Growth Factor (TGF)- $\beta$ 2



## FIG. 16

(SEQ ID NO: 15)

### Human Transforming Growth Factor (TGF)- $\beta$ 3



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## ***FIG. 17***

(SEQ ID NO: 16)

### **Human Transforming Growth Factor (TGF)- $\beta$ 4**

1 MWPLWLCWAL WVLPLAGPGA ALTEEQLLAS LLRQLQLSEV PVLDRADMEK  
51 LVIPAHVRAQ YVLLLRDGD RSRGKRFSQS FREVAGRFLA SEASTHLLVF  
101 GMEQRLPPNS ELVQAVLRLF QEPVPQGALH RHGRLSPAAP KARVTVEWLV  
151 RDDGSNRTSL IDSRLVSVHE SGWKAFDVTE AVNFWQQLSR PPEPLLQVS  
201 VQREHLGPLA SGAHKLVRFA SQGAPAGLGE PQLELHTLDL RDYGAQGDCD  
251 PEAPMTEGTR CCRQEMYIDL OGMKWAKNWV LEPPGFLAYE CVGTCQQPPE  
301 ALAFNWPFLG PRQCIASETA SLPMIVSIKE GGRTRPQVVS LPNMRVQKCS  
351 CASDGALVPR RLQHRPWCIH

## ***FIG. 18***

(SEQ ID NO: 17)

### **Human Neurturin**

1 MQRWKAAALA SVLCSSVLSI WMCREGLLLS HRLGPALVPL HRLPRTLDA  
51 IARLAQYRAL LQGAPDAMEL RELTPWAGRP PGPRRRAGPR RRRARARLGA  
101 RPCGLRELEV RVSELGLGYA SDETVLFRYC AGACEAAARV YDLGLRRLRQ  
151 RRRLRRERVR AQPCCRPTAY EDEVSFLDAH SRYHTVHEL ARECACV



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## FIG. 19

(SEQ ID NO: 18)

Human Inhibin  $\alpha$   
(Common to Inhibin A and Inhibin B)

1 MVLHLLLFLL LTPQGGHSCQ GLELARELVL AKVRALFLDA LGPPAVTREG  
51 GDPGVRRLPR RHALGGFTHR GSEPEEEEDV SQAILFPATD ASCEDKSAAR  
101 GLAQEAEEGL FRYMFRPSQH TRSRQVTSQAQ LWFHTGLDRQ GTAASNSSEP  
151 LLGLLALSPG GPVAVPMSLG HAPPHWAVLH LATSALSLLT HPVLVLLLR  
201 PLCTCSARPE ATPFLVAHTR TRPPSGGERA RRSTPLMSWP WSPSALRLLQ  
251 RPPEEPAAHA NCHRVALNIS FOELGWERWI VYPPSFIFHY CHGGCGLHIP  
301 PNLSLPVPGA PPTPAQPYSL LPGAQPCAA LPGTMRPLHV RTTSDGGYSF  
351 KYETVPNLLT QHCACI

## FIG. 20

(SEQ ID NO: 19)

Human Inhibin A -  $\beta$  Subunit ( $\alpha$ - $\beta$ A Heterodimer)

1 MPLLWLRGFL LASCWIIIVRS SPTPGSEGHs AAPDCPSCAL AALPKDVPNS  
51 QPEMVEAVKK HILNMLHLKK RPDVTQVPVK AALLNAIRKL HVGKVGENG  
101 VEIEDDIGRR AEMNELMEQT SEIITFAESG TARKTLHFEI SKEGSDLSV  
151 ERAEVWLFLK VPKANRTRTK VTIRLFQQQK HPQGS�DTGE EAEEVGLKGE  
201 RSELLLSEKV VDARKSTWHV FPVSSSIQRL LDQKSSLDV RIACEQCQES  
251 GASLVLLGKK KKKEEEGEGK KKGGEggGAG ADEEKEQSHR PFLMLQARQS  
301 EDHPHRRRRR GLECDGKVNI CCKKQFFVSF KDIGWNDWII APSGYHANYC  
351 EGECPSHIAG TSGSSLSFHS TVINHYMRG HSPFANLKSC CVPTKLRPMS  
401 MLYYDDGONI IKKDIQNMIV EECGCS

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## FIG.21

(SEQ ID NO: 20)

### Human Inhibin B - $\beta$ Subunit ( $\alpha$ - $\beta$ B Heterodimer)

1 MDGLPGRALG AACLLLLAAG WLGPEAWGSP TPPPTPAAPP PPPPPGSPGG  
51 SQDTCTSCGG FRRPEELGRV DGDFLEAVKR HILSRLQMRG RPNITHAVPK  
101 AAMVTALRKL HAGKVREDGR VEIPHLDGHA SPGADGQERV SEIISFAETD  
151 GLASSRVRLY FFISNEGNQN LFVVQASLWL YLKLLPYVLE KGSRRKVRVK  
201 VYFQEQGHGD RWNMVEKRVD LKRSGWHTFP LTEAIQALFE RGERRLNLDV  
251 QCDSCQELAV VPVFVDPGEE SHRPFVVVQA RLGDSRHRIR KRGLECDGRT  
301 NLCCRQQFFI DFRLIGWNDW IIAPTGY YGN YCEGSCPAYL AGVPGSASSF  
351 HTAVVNQYRM RGLNPGTVNS CCIPTKLSTM SMLYFDDEYN IVKRDVPNMI  
401 VEECGCA

## FIG.22

(SEQ ID NO: 21)

### Human Activin A ( $\beta$ A Homodimer)

1 MPLLWLRGFL LASCWIIVRS SPTPGSEGHS AAPDCPSCAL AALPKDVPNS  
51 QPEMVEAVKK HILNMLHLKK RPDVTQPVPK AALLNAIRKL HVGKVGENG  
101 VEIEDDIGRR AEMNELMEQT SEIITFAESG TARKTLHFEI SKEGSDLSV  
151 ERAEVWLFLK VPKANRTRTK VTIRLFQQQK HPQGS LDTGE EAEEVGLKGE  
201 RSELLLSEKV VDARKSTWHV FVPSSSIQRL LDQ GKSSLDV RIACEQCQES  
251 GASLVLLGKK KKKEEEGEGK KKG GEGGAG ADEEKEQSHR PFLMLQARQS  
301 EDHPHRRRRR GLECDGKVNI CCKKQFFVSF KDIGWNDWII APSGYHANYC  
351 EGECPSHIAG TSGSSLSFHS TVINHYRMRG HSPFANLKSC CVPTKLRPMS  
401 MLYYDDGQNI IKKDIQNMIV EECGCS

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## FIG.23

(SEQ ID NO: 22)

### Human Activin B ( $\beta$ B Homodimer)

1 MDGLPGRALG AACLLLLLAAG WLGPEAWGSP TPPPTPAAPP PPPPPGSPGG  
51 SQDTCTSCGG FRRPEELGRV DGDFLEAVKR HILSRLQMRG RPNITHAVPK  
101 AAMVTALRKL HAGKVREDGR VEIPHLDGHA SPGADGQERV SEIISFAETD  
151 GLASSRVRLY FFISNEGNQN LFFVVQASLWL YLKLLPYVLE KGSRRKVRVK  
201 VYFQEQGHGD RWNMVEKRVD LKRSGWHTFP LTEAIQALFE RGERRLNLDV  
251 QCDSCQELAV VPVFVDPGEE SHRPFVVVQA RLGDSRHRIR KRGLECDGRT  
301 NLCCRQOFFI DFRLIGWNDW IIAPTGYGYN YCEGSCPAYL AGVPGSASSF  
351 HTAVVNQYRM RGLNPGTVNS CCIPTKLSTM SMLYFDDEYN IVKRDVPNMI  
401 VEECGCA

## FIG.24

(SEQ ID NO: 23)

### Human Müllerian Inhibitory Substance (MIS)

1 MRDLPLTSLA LVLSALGALL GTEALRAEEP AVGTSGLIFR EDLDWPPGIP  
51 QEPLCLVALG GDSNGSSSPL RVVGALSAYE QAFLGAVQRA RWGPRDLATF  
101 GVCNTGDRQA ALPSLRRLGA WLRDPGGQRL VVLHLEEVTV EPTPSLRFQE  
151 PPPGGAGPPE LALLVLYPGP GPEVTVTRAG LPGAQSLCPS RDTRYLVLA  
201 DRPAGAWRGS GLALTLQPRG EDSRLSTARL QALLFGDDHR CFTRMTPELL  
251 LLPRSEPAPL PAHQQLDTVP FPPPRPSAEL EESPPSADPF LETLTRLVRA  
301 LRVPPARASA PRLALDPDAL AGFPQGLVNL SDPAALERLL DGEEPLLLLLL  
351 RPTAATTGDP APLHDPTSAP WATALARRVA AELQAAAAEL RSLPGLPPAT  
401 APLLARLLAL CPGGPGGLGD PLRALLLLKA LQGLRVEWRG RDPRGPGRAQ  
451 RSAGATAADG PCALRELSVD LRAERSVLIP ETYQANNCQG VCGWPQSDRN  
501 PRYGNHVLL LKMQARGAAL ARPPCCVPTA YAGKLLISLS EERISAHVVP  
551 NMVATECGCR

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## FIG.25

(SEQ ID NO: 24)

### Human Bone Morphogenic Protein (BMP)-2

1 MVAGTRCLLA LLLPQVLLGG AAGLVPELGR RKFAAASSGR PSSQPSDEVL  
51 SEFELRLLSM FGLKQRPTPS RDAVVPYML DLYRRHSGQP GSPAPDHRLE  
101 RAASRANTVR SFHHEESLEE LPETSGKTTR RFFFNLSIP TEEFITSDEL  
151 QVFREQMQDA LGNNSSFHHR INIYEIIKPA TANSKFPVTR LLDTRLVNQN  
201 ASRWESFDVT PAVMRWTAQG HANHGFEVVEV AHLEEKQGVV KRVHVRISRL  
251 HQDEHSWSQI RPLLVTFGHD GKGHPLHKRE KRQAKHKQRK RLKSSCKRHP  
301 LYVDFSDVGW NDWIVAPPGY HAFYCHGECF FPLADHLNST NHAIVQTLVN  
351 SVNSKIPKAC CVPTELSAIS MLYLDENEKV VLKNYQDMVV EGCGCR

## FIG.26

(SEQ ID NO: 25)

### Human Bone Morphogenic Protein (BMP)-3

1 MAGASRLFL WLGCFCVSLA QGERPKPPFP ELRKAVPGDR TAGGGPDSEL  
51 QPQDKVSEHM LRLYDRYSTV QAARTPGSLE GGSQPWRPRL LREGNTVRSF  
101 RAAAAETLER KGLYIFNLTS LTKSENILSA TLYFCIGELG NISLSCPVSG  
151 GCSHHAQRKH IQIDLSAWTL KFSRNQSPLL GHLSVDMAKS HRDIMSWLSK  
201 DITQFLRKAK ENEEFLIGFN ITSKGRQLPK RRLPFPEPYI LUYANDAAIS  
251 EPESVSSLQ GHRNFPTGTV PKWDHIRAA LSIERRKKRS TGVLLPLQNN  
301 ELPGAEYQYK KDEVWEERKP YKTLQAQAPF KSKNKKKQRK GPHRKSQTLQ  
351 FDEQTLKKAR RKQWIEPRNC ARRYLKVDFA DIGWSEWIIIS PKSFDAYYCS  
401 GACQFPMPKS LKPSNHATIQ SIVRAVGVP GIPEPCCVPE KMSSLSILFF  
451 DENKNVVLKV YPNMTVESCA CR

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## FIG.27

(SEQ ID NO: 26)

### Human Bone Morphogenic Protein (BMP)-3b

1 MAHVPARTSP GPGPQLLLLL LPLFLLLLRD VAGSHRAPAW SALPAAADGL  
51 QGDRDLQRHP GDAAATLGPS AQDMVAVHMH RLYEKYSRQG ARPGGGNTVR  
101 SFRARLEVVD QKAVYFFNLT SMQDSEMILT ATFHFYSEPP RWPRALEVLC  
151 KPRAKNASGR PLPLGPPTRO HLLFRSLSON TATQGLLRGA MALAPPPRGL  
201 WQAKDISPIV KAARRDGELL LSAQLDSEER DPGVPRPSPY APYILVYAND  
251 LAISEPNSVA VTLQRYDFPF AGDPEPRAAP NNSADPRVRR AAQATGPLQD  
301 NELPGLDERP PRAHAQHFK HQLWPSPFRA LKPRPGRKDR RKKGQEVFMA  
351 ASQVLDFDEK TMQKARRKQW DEPRVCSRRY LKVDFADIGW NEWIISPKSF  
401 DAYYCAGACE FPM PKIVRPS NHATIQSIVR AVGIIPGIPE PCCVPDKMNS  
451 LGVLFLDENR NVVLKVYPNM SVDTCACR

## FIG.28

(SEQ ID NO: 27)

### Human Bone Morphogenic Protein (BMP)-4

1 MIPGNRMLMV VLLCQVLLGG ASHASLIPET GKKKVAEIQG HAGGRRSGQS  
51 HELLRDFEAT LLQMFG LRRR PQPSKSAVIP DYMRDLYRLQ SGEEEEEQIH  
101 STGLEYPERP ASRANTVRSF HHEEHLENIP GTSENSAFRF LFNLS SIPEN  
151 EAISSAELRL FREQVDQGPD WERGFHRINI YEVMKPPAEV VPGHLITRLL  
201 DTRLVHHNVT RWETFDVSPA VLRWTREKQP NYGLAIEVTH LHQTRTHQGG  
251 HVRISRSLPQ GSGNWAQLRP LLVTFGHDGR GHALTRRRRA KRSPKHHSQR  
301 ARKKKNKNCRR HSLYVDFSDV GWNDWIVAPP GYQAFYCHGD CPFPLADHLN  
351 STNHAIVQTL VNSVNSSIPK ACCVPTELSA ISMLYLDEYD KVVLKNYQEM  
401 VVEGCGCR

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## FIG.29

(SEQ ID NO: 28)

### Human Bone Morphogenetic Protein (BMP)-5 Precursor

1 MHLTVFLLKG IVGFLWSCWV LVGYAKGGLG DNHVHSSFIY RRLRNHERRE  
51 IQREILSILG LPHRPRPFSP GKQASSAPLF MLDLYNAMTN EENPEESEYS  
101 VRASLAEETR GARKGYASP NGYPRRIQLS RTTPLTTQSP PLASLHDTNF  
151 LNDADMVMSF VNLVERDKDF SHQRRHYKEF RFDLTQIPHG EAVTAAEFRI  
201 YKDRSNNRFE NETIKISIQ IIKEYTNRDA DLFLLDTRKA QALDVGWLVF  
251 DITVTSNHVW INPQNNLGLQ LCAETGDGRS INVKSAGLVG RQGPQSKQPF  
301 MVAFFKASEV LLRSVRAANK RKNQNRNKSS SHQDSSRMSS VGDYNTSEQK  
351 QACKKHELYV SFRDLGWQDW IIAPEGYAAF YCDGECSPFL NAHMNATNHA  
401 IVQTLVHLMF PDHVPKPCCA PTKLNAISVL YFDDSSNVIL KKYRNMVVRS  
451 CGCH

## FIG.30

(SEQ ID NO: 29)

### Human Bone Morphogenetic Protein (BMP)-6/Vgrl

1 SSASDYNSSSELKTACRKHELYVSFQDLGW<sup>21</sup><sub>q</sub><sup>40</sup><sub>w</sub>I IAPKGYAANYCDGECSP  
51 LNAhtNHAIVQTLVHLMNPEYVPKPCCAPT<sup>81</sup><sub>KL</sub>NAISVL<sup>L3</sup>YFDDNSNVikY  
101 <sup>102</sup><sub>R</sub>NMVVRACGCH

1 ANVAENSSSDQRQACKKHELYVSFRDLGWQWIIAPEGYAAYYCEGECAFP  
 21 ————— L1 ————— 40  
 51 LNSATNHAIVQTLVHFINPETVPKPCCAPTQLNAISVLYFDDSSNVIKKY  
 81 ————— L3 —————  
 102  
 101 RNMVVRACGCH

(SEQ ID NO: 31)

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1      MTALPGPLWL LGLALCALGG GGPGLRPPPG CPQRRLGARE RRDVQREILA

51     VLGLPGRPRP RAPPAASRLP ASAPLFMLDL YHAMAGDDDE DGAPAERRLG

101    RADLVMSFVN MVERDRALGH QEPHWKEFRF DLTQIPAGEA VTAAEFRIYK

151    VPSIHLNRT LHVSMFQVVQ EQSNRESDLF FLDLQTLRAG DEGWLVLDTV

201    AASDCWLLKR HKDLGLRLYV ETEDGHSVDP GLAGLLGQRA PRSQQPFVVT

251    FFRASPSPIR TPRAVRPLRR RQPKKSNELP QANRLPGIFD DVHGSHGRQV

301    CRRHELYVSF QDLGWLDWVI APOGYSAYYC EGECSFPLDS CMNATNHAIL

351    QSLVHLMKPN AVPKACCAPT KLSATSVLYY DSSNNVILRK HRNMVVKACG

401    CH

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## FIG.33

(SEQ ID NO: 32)

### Human Bone Morphogenic Protein (BMP)-10

1 MGSLVLTLCALFCLAAYLVS GSPIMNLEQS PLEEDMSLFG DVFSEQDGVD  
51 FNTLLQSMKD EFLKTLNLSDIPTQDSAKVD PPEYMLELYN KFATDRTSMP  
101 SANIIRSFKN EDLFSQPVSF NGLRKYPLLF NVSIPHHEEV IMAELRLYTL  
151 VQRDRMIYDG VDRKITIFEV LESKGDNEGERNMLVLVSIGE IYGTNSEWET  
201 FDVTDAIRRW QKSGSSTHQL EVHIESKHDE AEDASSGRLE IDTSAQNKHN  
251 PLLIVFSDDQ SSDKERKEEL NEMISHEQLP ELDNLGLDSF SSGPGEEALL  
301 QMRSNIIYDS TARIRRNAKG NYCKRTPLYI DFKEIGWDSW IIAPPGYEAY  
351 ECRGVCNYPL AEHLTPTKHA IIQALVHLKN SQKASKACCV PTKLEPISIL  
401 YLDKGVVTYK FKYEGMAVSE CGCR

## FIG.34

(SEQ ID NO: 33)

### Human Bone Morphogenic Protein (BMP)-11

1 MVLAAPLLLG FLLLALELRP RGEAAEGPAA AAAAAAAAAA AGVGGERSSR  
51 PAPSVAPEPD GCPVCVWRQH SRELRLSEIK SQILSKLRLK EAPNISREVV  
101 KQLLPKAPPL QQILDHLDFQ GDALQPEDFL EEDEYHATTE TVISMAQETD  
151 PAVQTDGSPL CCHFHFSPKV MFTKVLKAQL WYVLRPVPRP ATVYLQILRL  
201 KPLTGEGTAG GGGGRRHIR IRSKIELHS RSGHWQSIDF KQVLHSWFRQ  
251 PQSNWGIEIN AFDPSGTDLA VTSLGPGAEG LHPFMELRVL ENTKRSRRNL  
301 GLDCDEHSSE SRCCRYPLTV DFEAFGWDWI IAPKRYKANY CSGQCEYMF  
351 QKYPHTHLVQ QANPRGSAGP CCTPTKMSPI NMLYFNDKQQ IIYGKIPGMV  
401 VDRCGCS



**FIG.35**

(SEQ ID NO: 34)

**I. HUMAN BONE MORPHOGENIC PROTEIN (BMP)-15**

1 MVLLSILRIL FLCELVLFME HRAQMAEGGQ SFIALLAEP TLPLIEEMLE  
51 ESPGEQPRKP RLLGHSLRYM LELYRRSADS HGHPRENRTI GATMVRLVKP  
101 LTSVARPHRG TWHIQILGFP LRPNRGLYQL VRATVVYRHH LQLTRFNLSC  
151 HVEPWVQKNP TNHFPSSEGD SSKPSLMSNA WKEMDITQLV QQRFWNNKGH  
201 RILRLRFMCQ QQKDSGGLEL WHGTSSLDIA FLLLYFNDTH KSIRKAKFLP  
251 RGMEEFMERE SLLRRTRQAD GISA EVTASS SKHSGPENNO CSLHPFQISF  
301 RQLGWDHWII APPFYTPNYC KGTCLRVLRD GLNSPNHAI QNLINQLVDQ  
351 SVPRPSCVPY KYVPISVLM EANGSILYKE YEGMIAESCT CR

**FIG.36**

(SEQ ID NO: 35)

**Human Norrie Disease Protein (NDP)****[Norrin]**

1 MRKHVLAASF SMLSLLVIMG DTDSKTDSSF IMDSDPRRCM RHHYVDSISH  
51 PLYKCSSKMV LLARCEGHCS QASRSEPLVS FSTVLKQPFR SSCHCCRPQT  
101 SKLKALRLRC SGMRLTATY RYILSCHCEE CNS

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## FIG.37

(SEQ ID NO: 36)

### Human Growth Differentiation Factor (GDF)-1

1 MPPPQQGPCG HLLLLLLALL LPSLPLTRAP VPPGPAAALL QALGLRDEPQ  
51 GAPRLRPVPP VMWRLFRRRD PQETRSGSRR TSPGVTLQPC HVEELGVAGN  
101 IVRHIPDRGA PTRASEPVSA AGHCPEWTVV FDLSAVEPAE RPSRARLELR  
151 FAAAAAAPE GGWELSVAQA GQGAGADPGP VLLRQLVPAL GPPVRAELLG  
201 AAWARNASWP RSLRLALALR PRAPAACARL AEASLLLVTL DPRLCHPLAR  
251 PRRDAEPVLG GPGGGACRAR RLYVSFREV G WHRWVIAPRG FLANYCQGQC  
301 ALPVALSGSG GPPALNHAUL RALMHAAAPG AADLPCCVPA RLSPISVLFF  
351 DNSDNVVLRO YEDMVVDECG CR

## FIG.38

(SEQ ID NO: 37)

### Human Growth Differentiation Factor (GDF)-5 Precursor

1 MRLPKLLTFL LWYLAULDLE FICTVLGAPD LGQRPQGSRP GLAKAEAKER  
51 PPLARNVFRP GGHSYGGGAT NANARAKGGT GQTGGLTQPK KDEPKKLPPR  
101 PGGPEPKPGH PPQTRQATAR TVTPKGQLPG GKAPPKAGSV PSSFLLKKAR  
151 EPGPPREPKE PFRPPPITPH EYMLSLYRTL SDADRKGNS SVKLEAGLAN  
201 TITSFIDKGQ DDRGPVVRKQ RYVFDISALE KDGLLGAELE ILRKKPSDTA  
251 KPAVPRSRRA AQLKLSSCPS GRQPAALLDV RSVPGLDGSG WEVFDIWKLF  
301 RNFKNQAQLC LELEAWERGR TVDLRGLGFD RAARQVHEKA LFLVFGRTKK  
351 RDLFFNEIKA RSGQDDKTVY EYLFSQRRKR RAPSATROGK RPSKNLKARC  
401 SRKALHVNEK DMGWDDWIIA PLEYEAFHCE GLCEFPLRSH LEPTNHAVIQ  
451 TLMNSMDPES TPPTCCVPTR LSPISILFID SANNVVYKQY EDMVVESCGC  
501 R

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## FIG.39

(SEQ ID NO: 38)

### Human Growth Differentiation Factor (GDF)-8 [Myostatin]

1 MQKLQLCVYI YLFMLIVAGP VDLNENSEQK ENVEKEGLCN ACTWRQNTKS  
51 SRIEAIIQI LSKLRLETAP NISKDVIRQL LPKAPPLREL IDQYDVQRDD  
101 SSDGSLEDDD YHATTETIIT MPTESDFLMQ VDGKPKCCFF KFSSKIQYNK  
151 VVKAQLWIYL RPVETPTTVF VQILRLIKPM KDGTRYTGIR SLKLDMPGT  
201 GIWQSIDVKT VLQNWLKQPE SNLGIEIKAL DENGHD LAVT FPGPGEDGLN  
251 PFLEVKVTD T PKRSRRDFGL DCDEHSTESR CCRYPLTVDF EAFGWDWIIA  
301 PKRYKANYCS GECEVFLQK YPHTHLVHQA NPRGSAGPCC TPTKMSPINM  
351 LYFNGKEQII YGKIPAMVVD RCGCS

## FIG.40

(SEQ ID NO: 39)

### Human Growth Differentiation Factor (GDF)-9

1 MARPNKFLW FCCFAWLCP ISLGSQASGG EAQIAASAEL ESGAMPWSLL  
51 QHIDERDRAG LLPALFKVLS VGRGGSPRLQ PDSRALHYMK KLYKTYATKE  
101 GIPKSNRSHL YNTVRLFTPC TRHKQAPGDQ VTGILPSVEL LFNLDRIITV  
151 EHLLKSVLLY NINNSVSFSS AVKVCNLM I KEKSSSRTL GRAPYSFTFN  
201 SQFEFGKKHK WIQIDVTSLL QPLVASNKRS IHMSINF TCM KDQLEHPSAQ  
251 NGLFNMTLVS PSLILYLNDT SAQAYHSWYS LHYKRRPSQG PDQERSLSAY  
301 PVGEEAAEDG RSSHHRHRRG QETVSSELKK PLGPASFNLS EYFRQFLLPQ  
351 NECELHDFRL SFSQLKWDNW IVAPHRYNPR YCKGDCPRAV GHRYGSPVHT  
401 MVQNIIEKL DSSVPRPSCV PAKYSPLSVL TIEPDGSIAY KEYEDMIATK  
451 CTCR

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## ***FIG.41***

(SEQ ID NO: 40)

### **Human Artemin (GDNF)**

1     MPGLISARGQ PLLEVLPQA HLGALFLPEA PLGLSAQPAL WPTLAALALL  
51     SSVAEASLGS APRSPAPREG PPPVLASPAG HLPGGRTARW CSGRRRPPP  
101    QPSRPAPPPP APPSALPRGG RAARAGGPGS RARAAGARGC RLRSQIVPEVR  
151    ALGLGHRSD LVRFRFCSGS CRRARSPHDL SLASLLGAGA LRPPPGSRPV  
201    SQPCCRPTRY EAVSFMDVNS TWRTVDRLSA TACGCLG

## ***FIG.42***

(SEQ ID NO: 41)

### **Human Glial Cell Derived Factor (GDNF)**

**[Persephin]**

1     MAVGKFLGGS LLLLSLQLGQ GWGPDARGVP VADGEFSSEQ VAKAGGTWLG  
51     THRPLARLRR ALSGPCQLWS LTLSVAELGL GYASEEKVIF RYCAGSCPRG  
101    ARTQHGLALA RLQGQGRAHG GPCCRPTRYT DVAFLDDRHR WORLPOLSAA  
151    ACGCGG